IEP | ENERGY PETROLEUM INSTITUTE

IEP ATEX

Supplement No: 4

(1) **EU-Type Examination Certificate**

(2) Equipment or Protective Systems Intended for use in Potentially Explosive Atmospheres

Directive 2014/34/EU

(3) EU – Type Examination Certificate Number: **IEP 13 ATEX 0140**

(4) Product: **Chemical Dosing and Injection Systems, LPG, O_2, N_2 Odorizing system; Type DO-CDI, DO-LPG/O_2 and DO-NG**

(5) Firm Name: **DAĞGAZ Doğalgaz Malzemeleri Mühendislik Müşavirlik Turizm İnşaat Taah. San.ve Tic. Ltd. Şti.**

(6) Firm Address: **Arslanbey OSB Mah. 8. Sok. No: 7 Kartepe - Kocaeli TURKEY**

(7) This product any of acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The IEP Uluslararası Enerji Petrol Gözetim, Sertifikasyon ve Teknik Hizmetler Organizasyonu Tic. Ltd. Sti., notified body number 2284 in accordance with Article 17 of the Directive 2014/34/EU of European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres, given in Annex II to the Directive. The examination and test results are recorded in confidential Report Nr: IEP.Rp.Ex.10. 494-4 date 24.03.2017.

(9) Compliance with Essential Health and safety requirements has been assured by compliance with;

EN 13463-1 / 2009 ; EN 13463-5 / 2011 ; EN 13463-8 / 2003 ; EN 60079-0 / 2012

(10) If the sign " X " is placed after the certificate number, it indicates that the product is subject to Specified Conditions of Safe Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product in accordance to the directive 2014/34/EU. Further requirements of the directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include the following:

Ex **II 1/2 G c k IIC T4**

Date of Issue : 05.07.2013
Supplement No: 4 / Date of Issue : 27.03.2017

Responsible Person:

Nurettin Terzioglu
Head of Certification Body

ENERGY PETROLEUM INSTITUTE INSPECTION AND CERTIFICATION IEP ATEX NB 2284

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(13) Schedule

(14) Certificate Nr : **IEP 13 ATEX 0140**

(15) Description of Equipment ;

DO-LPG/O_2 and DO-NG type odorizes pump and dose the necessary, predetermined or calculated amount of odorant into gas pipe line. Systems uses Natural Gas or Nitrogen pneumatic power source. System consists of a pneumatic cabinet and a controller cabinet.

Regulators used to reduce as pressure to be used to drive pumps and pressurize odor tank. Solenoids control the driver gas for pumps. Pneumatically driven pumps inject the odorant to pipeline. And the flow meter measures the amount pumped to the pipeline accurately.

The hydraulic system box in IP 23 degree of protection according to EN 60529:1991 +A1:2000. The hydraulic system box have natural ventilated in perforated covers.

Electrical control box has been mounting in the nonhazardous area. If electrical control box is mounding in the hazardous area, electrical control box should be exproof.

The determination of hazardous areas inside and outside of the odorizing system is defined in accordance to EN 60079-10-1.

The electrical and non-electrical equipments installed in a.m hazardous areas are in corresponding Ex-type of protection specified "List of electrical and non-electrical parts."

(16) Special conditions for safe use :

DO-LPG/O2, DO-NG type odorizes pump and DO-CDI chemical injection pump have to conform to the relevant national regulations.

(17) Essential Health and Safety Requirements :

17 .1 Covered by standards mentioned in [9] of this certificate.

17 .2 According to Directive 94/9/EC Annex2, clause1.0.6 and manufacture's service and operation manual for use dated 14.05.2013 , DO-LPG/O2, DO-NG type odorizes system and DO-CDI Chemical Injection System allowed to be installed in hazardous area specified according to EN 60079-10-1.

17 .3 At the installation and the operation of DO-LPG/O_2 and DO-NG type odorizes system have to be observed manufacture's service and operation manual dated 05.10.2010 (70 pages).

(18) Coding System;

DO X Y Z H K L M

- M → Kind of Pumps
- L → Pump Volume
- K → Additional Property
- H → Temperature Option
- Z → Option
- Y → Number of Pumps
- X → Odorizer Type

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ENERGY PETROLEUM INSTITUTE * INSPECTION AND CERTIFICATION * IEP ATEX NB 2284

(19) Certificate Nr : **IEP 13 ATEX 0140**

(20) Description of the Code ;

X:Chemical Dosing System or Odorizer Type	**NG: Natural Gas Odorizer**	**LPG: LPG or Propane Odorizer**	**O2/N2: Oxygen Odorizer**	**CDI: Chemical Dosing and Injection System**
Y:Number Of Pumps	0: Pressure Injection			
	1: Single Pump			
	2: With Backup Pump Width Orientation			
	3: With Backup Pump Depth Orientation			
Z:Option	A : Natural Gas RMS A	A : LPG Single Line	A : O2/N2 Single Line	A : Standard Chemical Inject System
	B : Natural Gas RMS B	B : LPG Multi Line	B : O2/N2 Dual Line	B : Chemical Inject System without N2
H:Temperature Option	-20 °C +60 °C			
K: Additional Property	I: Injector			
	T: Pneumatic Timer			
	F: Flowmeter			
	H: Vapour Trap			
	P: Pressure Sensor			
	C: Calibration Column			
	V: Verometer (Mass Flow Controller)			
L:Pump Stroke Volume	3:3cc Pump 3 lt/h 20: 20cc Pump 40 lt/h			
M: Kind of Pumps	E : Electric Pump		EM : Positive Displacement Motor Driven Electric Pump	
			ES : Solenoid Driven Electric Pump	
	P : Pneumatic Pump			

(21) Technical Specifications;

Operation Output Max .	:	2 lt/h to 40 lt/h
Operation Pressure Max.	:	120 Bar
Ambient Temperature	:	-10 ; + 40^{0}C (regular model)
Ambient Temperature	:	-20 ; + 60^{0}C (high temperature model)
Electrical Sheets	:	110 / 230 V AC ; 24V DC Solar System 4A (Max)
Data Communication Signal	:	0-10 V DC (4-20 mA), Pulse, RS 485 TCP IP
Usage	:	Natural Gas Odorizing, LPG Odorizing, O_2 / N_2 Odorizing, Chemical Dosing and Injection

Responsible Person ;

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Head of Certification Body

ENERGY PETROLEUM INSTITUTE IEP ATEX NB 2294 INSPECTION AND CERTIFICATION

(22) Certificate Nr : **IEP 13 ATEX 0140**

(23) List of Documentation ;

Service and operation manual 2 time (30 and 28 page) 06.06.2014
Risk analysis reports (2 page)EN 13463-1 and (4 page)EN 13463-5 / 8

Drawing Nr;	Drawing Name ;	Drawing Date;
DO-LPG-1A	Exploded	30.04.2013
DO-LPG-1B	Exploded	30.04.2013
DO-LPG-2A	Exploded	30.04.2013
DO-LPG-2B	Exploded	30.04.2013
DO-LPG-3A	Exploded	30.04.2013
DO-LPG-3B	Exploded	30.04.2013
DO-NG-1A	Exploded	30.04.2013
DO-NG-1B	Exploded	30.04.2013
DO-NG-2A	Exploded	30.04.2013
DO-NG-2B	Exploded	30.04.2013
DO-NG-3A	Exploded	30.04.2013
DO-NG-3B	Exploded	30.04.2013
DO-O2-1	Exploded	30.04.2013
DO-O2-2	Exploded	30.04.2013
DO-O3-3	Exploded	30.04.2013
DO-LPG-1A	General	30.04.2013
DO-LPG-1B	General	30.04.2013
DO-LPG-2A	General	30.04.2013
DO-LPG-2B	General	30.04.2013
DO-LPG-3A	General	30.04.2013
DO-LPG-3B	General	30.04.2013
DO-NG-1A	General	30.04.2013
DO-NG-1B	General	30.04.2013
DO-NG-2A	General	30.04.2013
DO-NG-2B	General	30.04.2013
DO-NG-3A	General	30.04.2013
DO-NG-3B	General	30.04.2013
DO-O2-1	General	30.04.2013
DO-O2-2	General	30.04.2013
DO-O3-3	General	30.04.2013
DO-NG-3-A-CF-3	ADF drawing	06.06.2014
DO-NG-3-A-CV-3	ASD drawing	13.06.2014
DO-NG-3-A-CT-3	ASD drawing	06.06.2014
DO-NG-3-A-CFT-3	ASDASD drawing	06.06.2014
DO-NG-3-A-FS-3	ASDASD drawing	06.06.2014
DO-NG-3-A-TF-3	DASF drawing	06.06.2014
DO-NG-3-A-TS-3	QWE drawing	06.06.2014
DO-NG-0	QE drawing	02.04.2014

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(24) Certificate Nr : **IEP 13 ATEX 0140**

(25) List of Documentation ; (More of the Article 23)

Drawing Nr;	Drawing Name ;	Drawing Date ;
DO-LPGDRW036	Outside and Zone Drawing	30.04.2013
DO-LPG-1-A DRW037	Outside and Zone Drawing	30.04.2013
DO-LPG-1-B DRW038	Outside and Zone Drawing	30.04.2013
DO-LPG-2-A DRW039	Outside and Zone Drawing	30.04.2013
DO-LPG-2-B DRW040	Outside and Zone Drawing	30.04.2013
DO-LPG-3-A DRW041	Outside and Zone Drawing	30.04.2013
DO-LPG-3-B DRW042	Outside and Zone Drawing	30.04.2013
DO-NG DRW044	Outside and Zone Drawing	30.04.2013
DO-NG-1-A DRW046	Outside and Zone Drawing	30.04.2013
DO-NG-1-B DRW047	Outside and Zone Drawing	30.04.2013
DO-NG-2-A DRW048	Outside and Zone Drawing	30.04.2013
DO-NG-2-B DRW049	Outside and Zone Drawing	30.04.2013
DO-LPG DRW050	Outside and Zone Drawing	30.04.2013
DO-O2-1 DRW051	Outside and Zone Drawing	30.04.2013
DO-O2-2 DRW052	Outside and Zone Drawing	30.04.2013
DO-O3-3 DRW053	Outside and Zone Drawing	30.04.2013
DO-DRW043	Mounding	30.04.2013
DO-LPG DRW056	Dimensions	30.04.2013
DO-NG DRW057	Dimensions	30.04.2013
DO DRW058	Marking	30.04.2013
DO DRW059	Ventilation calculation	30.04.2013
DO-LPG-(2-3)-B-OC DRW061	Electrical diagram	30.04.2013
DO-NG-(2-3)-(A-B)-OC DRW062	Electrical diagram	30.04.2013
DO-LPG-(2-3)-A-OC DRW060	Electrical diagram	30.04.2013
DO-NG-3-A –CF-3 P&ID	NG Pipe line	06.06.2014
DO-NG-3-A –CT-3 P&ID	NG Pipe line	06.06.2014
DO-NG-3-A –CFT-3 P&ID	NG Pipe line	06.06.2014
DO-NG-3-A –CV-3 P&ID	NG Pipe line	06.06.2014
DO-NG-3-A –TF-3 P&ID	NG Pipe line	06.06.2014
DO-NG-3-A –TS-3 P&ID	NG Pipe line	06.06.2014
DO-NG-3-A –FS-3 P&ID	NG Pipe line	06.06.2014
DRW166 DO-NG-0-A-FS	NG Pipe line	06.06.2014
DO-CDI-3A-FP-EM	Chemical Dosing Injection System P&ID	06.06.2014
DO-CDI-3A-FP-P	Chemical Dosing Injection System P&ID	06.06.2014
DO-CDI-3A-FH-3-ES	Chemical Dosing Injection System P&ID	13.06.2014
DO-CDI-3A-FH-20-EM	Chemical Dosing Injection System P&ID	13.06.2014
DO-CDI-3A-FH-P	Chemical Dosing Injection System P&ID	13.06.2014

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(26) Certificate Nr : **IEP 13 ATEX 0140**

(27) List of Documentation ; (More of the Article 23)

Drawing Nr	Drawing Name	Date
DO-CDI-MO-CT	Mobile -Mini CDI System P&ID	30.04.2013
DO-CDI-LPG-CT	Mobile -Mini CDI System P&ID	30.04.2013
DO-CDI-3B-F-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-3B-F-ES	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-3B-FI-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-3B-FI-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-3B-F-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-3A-F-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-1A-F-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-1A-F-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-1B-F-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-1B-F-ES	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-1B-FI-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-1B-FI-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-2A-F-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-2A-F-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-2B-F-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-2B-F-ES	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-2B-FI-ES	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-2B-FI-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-2B-F-P	Chemical Dosing Injection System P&ID	30.04.2013
DO-CDI-3A-F-EM	Chemical Dosing Injection System P&ID	30.04.2013
DO-LPG-1A-F-E	Odorizer P&ID	30.04.2013
DO-LPG-1A-F-P	Odorizer P&ID	30.04.2013
DO-LPG-1B-F-E	Odorizer P&ID	30.04.2013
DO-LPG-1B-F-P	Odorizer P&ID	30.04.2013
DO-LPG-2A-F-E	Odorizer P&ID	30.04.2013
DO-LPG-2A-FH-P	Odorizer P&ID	30.04.2013
DO-LPG-2B-F-E	Odorizer P&ID	30.04.2013
DO-LPG-2B-FH-P	Odorizer P&ID	30.04.2013
DO-LPG-3A-FH-3-E	Odorizer P&ID	30.04.2013
DO-LPG-3A-F-P	Odorizer P&ID	30.04.2013

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(28) Certificate Nr : **IEP 13 ATEX 0140**

(29) List of Documentation ; (More of the Article 23)

Drawing Nr;	**Drawing Name;**	**Date;**
DO-LPG-3B-FH-3-E	Odorizer P&ID	30.04.2013
DO-LPG-3B-F-P	Odorizer P&ID	30.04.2013
DO-NG-1A-F-E	Odorizer P&ID	30.04.2013
DO-NG-1A-F-P	Odorizer P&ID	30.04.2013
DO-NG-1A-FT-P	Odorizer P&ID	30.04.2013
DO-NG-1A-VT-P	Odorizer P&ID	30.04.2013
DO-NG-1B-F-E	Odorizer P&ID	30.04.2013
DO-NG-1B-F-P	Odorizer P&ID	30.04.2013
DO-NG-1B-FT-P	Odorizer P&ID	30.04.2013
DO-NG-2A-FH-E	Odorizer P&ID	30.04.2013
DO-NG-2A-FH-P	Odorizer P&ID	30.04.2013
DO-NG-2B-FH-E	Odorizer P&ID	30.04.2013
DO-NG-2B-FH-P	Odorizer P&ID	30.04.2013
DO-NG-3A-F-E	Odorizer P&ID	30.04.2013
DO-NG-3A-VHT-P	Odorizer P&ID	30.04.2013
DO-NG-3B-F-E	Odorizer P&ID	30.04.2013
DO-NG-MO-CT	Odorizer P&ID	30.04.2013

List of electrical parts Table 2 (1 page)	06.06.2014
List of non-electrical parts Table 1 (2 page)	06.06.2014
Additional equipment list :	20.02.2017
User manually (45 page)	20.02.2017

Responsible Person ;

Nurettin Terzioglu
Head of Certification Body

Date of Issue : 05.07.2013
Supplement No: 4 Date of Issue : 27 .03.2017

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